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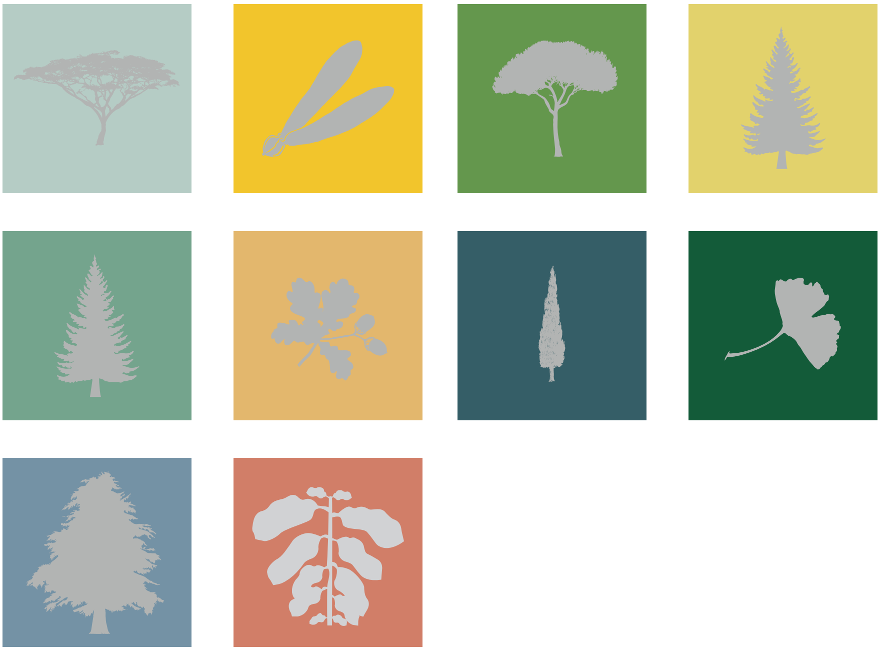
COMMISSION ON
GENETIC RESOURCES
FOR FOOD AND
AGRICULTURE

GLOBAL PLAN OF ACTION
FOR THE CONSERVATION, SUSTAINABLE USE AND DEVELOPMENT OF FOREST GENETIC RESOURCES



Second edition, 2025

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Food and Agriculture Organization of the United Nations
Rome, 2025

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FOREWORD

Forests and other wooded lands are essential to people and the planet. They provide wood and non-wood forest products that support livelihoods, contribute to food security, help maintain biodiversity and food diversity, as well as soil fertility, protect water catchments and mitigate the impacts of the climate crisis. At the core of these ecosystem services are forest genetic resources: the heritable materials maintained within and among tree and other woody plant species that are of actual or potential economic, environmental, scientific or societal value. The genetic diversity of these species is also crucial for maintaining the resilience of forests and enabling their adaptation to the impacts of the climate crisis.

People use trees and other woody plants in a broad range of agrifood systems. Forest genetic resources underpin the productivity and long-term sustainability of these systems and contribute to the Four Betters - better production, better nutrition, a better environment and a better life, leaving no one behind – as set out in the FAO Strategic Framework 2022-31.

The Second Report on the State of the World's Forest Genetic Resources was launched in 2025 during the 20th Regular Session of the Commission on Genetic Resources for Food and Agriculture. The report, developed under the auspices of the Commission, provides the findings of a global assessment of these resources and examines progress in implementing the Global Plan of Action for the Conservation, Sustainable Use and Development of Forest Genetic Resources, adopted by the FAO Ministerial Conference in 2013. While progress has been made for the conservation and sustainable use of forest genetic resources, the report reveals limitations and gaps that require reinforced action to enhance the management of forest genetic resources and to increase international awareness of their importance.

At its 44th Session in July 2025, the FAO Ministerial Conference adopted the revised Global Plan of Action, updated based on the findings of the Second Report, through Resolution 2/2025, *Reaffirming the World's Commitment to the Conservation, Sustainable Use and Development of Forest Genetic Resources*, as reproduced in Part III of this publication. Importantly, the Resolution recognizes the vital contributions of forest genetic resources

to the 2030 Agenda for Sustainable Development, the United Nations Strategic Plan for Forests 2017–2030 and other globally agreed instruments on biodiversity, climate change and desertification. It invites Members to strengthen efforts to implement the Global Plan of Action and to integrate forest genetic resources into relevant national policies and strategies, while calling on all partners and stakeholders, including donors, to collaborate in its effective implementation.

I call upon Members, Indigenous Peoples, local communities and other actors to seize the opportunity created by this revised Global Plan of Action to better manage forest genetic resources and to harness their full potential to transform agrifood systems, while contributing to climate change mitigation and adaptation, for the benefit of present and future generations and a foods-secure future for all.

屈冬玉

Qu Dongyu
FAO Director-General

ABBREVIATIONS

CARE	Collective benefit, Authority to control, Responsibility and Ethics
COFO	Committee on Forestry
Commission	Commission on Genetic Resources for Food and Agriculture
FAO	Food and Agriculture Organization of the United Nations
FAIR	Findable, Accessible, Interoperable and Reusable
FGR	forest genetic resources
Forest Gene Panel	Panel of Experts on Forest Gene Resources
NAPs	National Adaptation Plans
NBSAPs	National Biodiversity Strategies and Action Plans

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PART I
INTRODUCTION

Forest covers about 31 percent of the world's total land area; 93 percent of this is natural forest and only 7 percent planted. Forest ecosystems remain essential refuges for biodiversity, and 11 percent of the world's forest land is designated primarily for the conservation of biodiversity. Approximately 33 million people worldwide are formally employed in the forestry sector. Many more depend directly on forests and forest products for their food security and livelihoods. In developing countries, wood-based fuels are the dominant source of energy for more than 2 billion poor people. In Africa, over 90 percent of harvested wood is used for energy. Wood is not the only resource taken from forests. About 80 percent of people in developing countries use non-wood forest products to meet their nutrition and health needs and for income.

The contribution of forests and trees to meeting the present and future challenges of food security, poverty alleviation and sustainable development depends on the availability of rich diversity between and within tree species. Globally, there are about 58 000 tree species. Genetic diversity is needed in order to ensure that forest trees can survive, adapt and evolve under changing environmental conditions. It also maintains the vitality of forests and provides resilience to stresses such as pests and diseases. Furthermore, genetic diversity is needed for artificial selection, breeding and domestication programmes for the development of adapted varieties or to strengthen useful traits. In many countries, prospects for sustainable development in rural areas will be greatly influenced by the state of diversity in forest ecosystems and tree and other woody plant species.

Efforts to sustainably manage forest genetic resources (FGR) at international as well as at national level need to draw on solid and coherent baseline information. The country reports submitted for the preparation of global assessments of FGR (FAO, 2014; 2025), which were developed based on FAO guidelines, are the main source of comparable information on FGR and their management and have served as the basis for the identification of priority areas for action on FGR.

Conserving FGR is vital, as they are unique and irreplaceable resources for the future. FAO has for many decades acknowledged their importance. Already in 1967, the FAO Conference recognized

that forest genetic diversity was increasingly being lost, and requested the establishment of the Panel of Experts on Forest Gene Resources (the Forest Gene Panel) to help plan and coordinate FAO's efforts in the management of the genetic resources of forest trees.

FAO's activities on FGR are an integral part of its work on forestry and contribute to other programmatic activities such as the Global Forest Resources Assessment, national forest programmes, sustainable forest management, tree breeding and plantation development, and protected area management. For many decades, the Forest Gene Panel has guided FAO's work on FGR, reporting on progress made to the Committee on Forestry (COFO).

Nature of the Global Plan of Action

The Global Plan of Action for the Conservation, Sustainable Use and Development of Forest Genetic Resources (Global Plan of Action) is voluntary and non-binding and should not be interpreted or implemented in contradiction with existing national legislation and international agreements where applicable.

The Global Plan of Action constitutes a rolling document that can be updated in line with any follow-up that the Commission on Genetic Resources for Food and Agriculture (Commission) may decide upon. In 2025, in response to the findings of *The Second Report on the State of the World's Forest Genetic Resources* (FAO, 2025a), the Global Plan of Action was reviewed and revised by the Twentieth Regular Session of the Commission and adopted by the 44th Session of the FAO Conference.

The relative priority of each strategic priority and associated actions may differ significantly in different countries and regions. Relative priority may depend on the genetic resources themselves, the natural environment or production systems involved, current management capacities, financial resources or policies already underway for the management of FGR.

Rationale for the Global Plan of Action

Key features of forest genetic resources

Most forest tree species are wild, managed in natural ecosystems or are at a very early stage of selection or domestication compared to agricultural crops (National Academic Press, 1991).

Forest tree species are typically long-lived, highly heterozygous organisms that have developed natural mechanisms to maintain high levels of intraspecific variation, such as high rates of

out-crossing, and dispersal of pollen and seeds over wide areas. These mechanisms, combined with native environments that are often variable in both time and space, have contributed to the evolution of forest tree species into some of the most genetically variable organisms on Earth (FAO, FLD & IPGRI, 2004a). *In situ* conservation, allowing dynamic maintenance of genetic diversity and processes, is the preferred approach for forest tree species, while *ex situ* conservation is most commonly used for domesticated plant species.

Forest trees and other woody plants have multiple functions in that they provide numerous products and services. About 80 percent of people in the developing world use non-wood forest products for nutrition, health and income.

Quantifying the value of the benefit derived from FGR is difficult for several reasons. Apart from wood, most forest products are harvested for local consumption or commercialized without proper national monitoring and documentation. This is particularly the case in developing countries.

In terms of their present or potential contribution to food security and sustainable development, FGR are underutilized and undervalued.

Knowledge of FGR is usually scattered and held by various institutions in unpublished reports, meaning that in many countries access to it is limited. Baseline information, such as country species checklists, species distribution maps and forest reproductive material catalogues, are lacking.

The number of known tree species is approximately 58 000, but current efforts in countries to test and improve FGR focus on approximately 500 species.

Aims of the Global Plan of Action

The main aims of the Global Plan of Action are to:

- strengthen understanding and knowledge of FGR;
- promote the sustainable use and management of FGR;
- develop and strengthen *in situ* and *ex situ* FGR conservation programmes through collaboration at national, regional and global levels;
- promote access to, and sharing of, information on FGR at regional and national levels;

- create and strengthen national programmes to increase regional and international cooperation, including in research, education and training on the use and sustainable management of FGR, and to enhance institutional capacity;
- assist countries, as appropriate, to integrate FGR conservation and management needs into wider national policies and programmes and frameworks of action at national, regional and global levels;
- promote the assessment of FGR-related traditional knowledge, innovations and practices, the equitable sharing of benefits arising from their use, the recognition of their roles and, where appropriate, the putting in place of effective policies and legislation addressing these matters;
- promote adequate access to, and use of, quality forest reproductive material to support research and development programmes at national and regional levels and in line with the international laws and regulations regarding intellectual property;
- promote ecosystem and ecoregional approaches as efficient means of promoting sustainable use and management of FGR;
- assist countries and institutions responsible for the management of FGR to establish, implement and regularly review national priorities for their sustainable use and management of FGR; and
- strengthen national programmes and enhance institutional capacity – in particular, in developing countries and countries with economies in transition – and develop relevant regional and international programmes. Such programmes should include education, research and training to address the characterization, inventory, monitoring, conservation, development and sustainable use of FGR.

The strategic priorities of the Global Plan of Action are based on the assumption that countries have sovereign rights over their natural resources, including FGR, and that substantial international cooperation is necessary in the management of FGR. In this context, the strategic priorities of the Global Plan of Action were developed on the basis of the following principles:

- Genetic diversity is the mainstay of biological stability; it enables species to adapt to changing environments, including the effects of climate change and emerging diseases. It is the basis for present and future selection and breeding programmes. In addition to their irreplaceable contribution to environmental sustainability, FGR provide a direct food source for humans and animals, even at times when annual crops fail.
- Inventory, characterization and monitoring are necessary to generate the knowledge needed for proper understanding of trends in the status of FGR and to enable adequate decision-making in the sustainable management and use of FGR.

- *In situ* conservation is the most widespread conservation practice because most forest tree species grow wild and are not being domesticated. It also allows species populations to continue to be exposed to evolutionary processes.
- The effective management of FGR, at all levels, depends on the inclusion and willing participation of all relevant stakeholders. Appropriate participatory processes that ensure that the interests of different stakeholders are respected and balanced are required.
- Strengthening efforts to develop institutional partnerships within and among countries is essential, given that species distribution and ecosystem boundaries do not respect country borders. Strong partnerships and collaboration at various levels are needed in order to improve awareness and develop appropriate national and international regulations and policy tools that lead to sound technical and scientific programmes at national, regional and global levels.

Resource mobilization to allow timely and adequate implementation of the Global Plan of Action requires due attention and effort at all levels, including coordination with the numerous initiatives underway within countries, regionally and globally.

Structure and organization of the Global Plan of Action

The strategic priorities of the Global Plan of Action are often closely related and interlinked. Many of the actions foreseen are relevant to more than one priority. They are grouped into four priority areas:

1. Improving the availability of, and access to, information on FGR
2. Conservation of FGR (*in situ* and *ex situ*)
3. Sustainable use, development and management of FGR
4. Policies, institutions and capacity building.

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PART II

STRATEGIC PRIORITIES FOR ACTION

Priority Area 1

Improving the availability of, and access to, information on forest genetic resources

Introduction

It is recognized that reliable data on forest status and trends are of great importance to the efficient management of FGR. However, currently available forest-related information largely relates to forest resources in general rather than to forest diversity and variation in tree and other woody plant species. The availability of specific information on the status and trends in FGR is inadequate, although some progress has been made at national and subregional levels during the last decade.

The availability of, and access to, quality and up-to-date information on FGR is reported to be poor in many countries. Most country reports highlight the need to promote awareness among decision-makers and the general public of the importance of FGR and their roles in meeting present and future development needs. Lack of information limits the capacity of countries and the international community to integrate FGR management into cross-cutting policies.

Gaps in information related to FGR include the following:

a. in many countries, a lack of an updated species checklist;
b. a lack of an accurate global picture of the status and trends of FGR;
c. a lack of a comprehensive assessment of national and international capacities to manage FGR;
d. a lack of an accepted methodology for directly linking general information on changes in forests to their impacts on biological diversity, species, populations and genetic variation; and

e. a lack of the knowledge of the reproductive and development characteristics of tree and other woody plant species that would allow for effective *ex situ* conservation, production of seedlings, planting and development of such species outside their original habitats.

These deficiencies complicate global monitoring of the status and trends of FGR and limit capacity for effective decision-making and action at national and international levels.

In many countries, there is an important relationship between the use and management of FGR and traditional knowledge. This valuable knowledge supports the livelihoods of Indigenous Peoples and local communities in many developing countries, while also representing a tremendous asset for industrial and trade development in sectors such as pharmacy, food and biopesticides. Policies on FGR information management should take these important roles into consideration. Traditional knowledge is under threat as a consequence of FGR degradation and changes in land use and sociocultural practices.

Long-term goal

Improve the availability and accessibility of knowledge and information on tree and other woody plant species and their genetic diversity, forest ecosystems and related traditional knowledge, to facilitate and enable decision-making on sustainable use and management of FGR and to enhance their contribution to solving serious global problems such as food shortage, land and water degradation, the effects of climate change, and increased demand for various forest products and services.

National level

Strategic Priority 1: Establish and strengthen national forest genetic resources assessment, characterization and monitoring systems

Rationale

Information on FGR is inadequate in many countries. National forest inventories do not usually include the parameters needed for planning the sustainable management of FGR. Baseline information on the status, trends and characteristics of FGR is needed in order to allow the definition and regular review of priorities for sustainable use and conservation, as well as the development of tree domestication and improvement programmes.

Action

- Promote species inventory and characterization. Promote mapping of the distribution of priority or important species populations. Reinforce the capacities of national herbaria and botanic surveys to support the development of knowledge on forest species.
- Develop technical standards, protocols and information systems for assessing and monitoring the status of FGR management. Promote and support the development of national and regional species checklists and mechanisms for updating them regularly.
- Develop networks of forest genebanks, information units and databases, and enhance information management and sharing at national and international levels.

Strategic Priority 2: Develop national and subnational systems for the assessment and management of traditional knowledge on forest genetic resources

Rationale

Traditional knowledge can make a significant contribution to sustainable development through practices such as local conservation and sustainable use of plants and can contribute to efforts to solve serious global problems such as climate change, desertification, and land and water degradation. There is therefore a need to preserve traditional knowledge of FGR by developing national assessments and improving documentation.

Actions

- Promote national-level assessments and documentation of traditional knowledge related to the use and management of FGR with the free, prior and informed consent of Indigenous Peoples as well as local communities.
- Develop and strengthen national and subnational traditional knowledge registration mechanisms and databases to preserve, protect and promote traditional knowledge on FGR. Encourage the use of standardized protocols for the collection of traditional knowledge.
- As appropriate, develop guidance on registering, accessing, storing and using traditional knowledge of FGR at national, subnational and local scales, with effective participation of Indigenous Peoples as well as local communities, taking into consideration similar initiatives under the Convention on Biological Diversity.

International level

Strategic Priority 3: Develop international technical standards and protocols for forest genetic resources inventories, characterization and monitoring of trends and risks

Rationale

Scientifically sound, realistic and policy-relevant indicators for defining a baseline and monitoring the status and trends of FGR and their management are lacking at global, regional and national levels. There is a need to develop and use standardized methods and protocols for inventory, characterization and monitoring. There is also a need to enhance the coordination of research on the identification, mapping and characterization of species populations and to improve the impact of the results on FGR management policies.

Actions

- Develop global criteria and indicators for assessing the status and trends of FGR within national forest inventories and other forest-related programmes.
- Develop protocols for participatory assessment and monitoring of FGR.

Strategic Priority 4: Promote the establishment and the reinforcement of forest genetic resources information systems (databases) to cover available scientific and traditional knowledge on uses, distribution, habitats, biology and genetic variation of species and species populations

Rationale

Building on the First Report, *The Second Report on the State of the World's Forest Genetic Resources* provides a global overview of the diversity, status and trends of FGR and of national, regional and global capacity to manage these resources. Many country reports indicate that there are important gaps in knowledge of FGR and that information at country level is scattered and difficult to access. Furthermore, research programmes suffer from a lack of adequate financial support, especially in developing countries. There is therefore an urgent need to improve access to information on FGR for all stakeholders, while also developing the knowledge base required for sustainable use and management of FGR. There is also a need to improve countries' financial support to research activities.

Actions

- Improve access to information by developing and strengthening information management and sharing mechanisms at national, regional and global levels. The information should be collected following the Collective benefit, Authority to control, Responsibility and Ethics (CARE) principles as they apply to Indigenous or traditional knowledge and Findable, Accessible, Interoperable and Reusable (FAIR) principles, as appropriate.
- Promote the establishment, maintenance and regular updating of FGR databases and information systems at local, subnational, national, regional and global levels.
- Promote collaboration between researchers, Indigenous Peoples as well as local communities, and governmental institutions to collect, validate and update data.
- Strengthen technical capacity for information system management.
- Improve access to information on forest species for a wide range of stakeholders, including Indigenous Peoples as well as local communities.

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Priority Area 2
In situ and *ex situ* conservation of forest genetic resources

Introduction

The development of national and regional conservation strategies for FGR is necessary in order to maintain the adaptive and neutral genetic diversity of forest trees and other woody plants. This goal can be met by applying *in situ* conservation methods across the distribution ranges of these species. Regional collaboration through species or thematic networks should play an important role in implementing the conservation strategy and monitoring the progress made. This collaboration should aim to facilitate the use of the ecosystem approach and to promote greater awareness of the different types of forest and tree management (Table 1) and the different levels of genetic conservation.

Protected areas are established, regulated and managed to achieve conservation objectives in the context of growing pressure from the harvesting of forest resources and the conversion of forests to other land-use types. They mostly serve as refuges for species that are unable to survive in intensely managed landscapes. National programmes for the sustainable use and management of FGR should therefore take the important roles of protected areas into account, even though most of them may have been primarily designed for purposes such as the protection of wildlife (mostly animals), recreation and various ecosystem services.

Protected areas are suitable for the conservation of viable forest tree populations of diverse species and of representative ecosystem samples, as well as for maintaining vital ecosystem services.

Marginal and/or range-limits tree species populations (Sexton *et al.*, 2009) may be crucial sources of adaptation to the novel environmental extremes that are expected to occur as a result of rapid climatic change. It is necessary to understand the dynamics of marginal tree species populations through adequate examination of adaptive genetic variation in quantitative traits. Furthermore, conservation in the context of climate change requires accurate estimates of the positions of future extreme environmental conditions (range limits). Modelling of species distribution dynamics needs to account for changes in species' distribution areas and in those of their associated environmental correlates (e.g. pollinators), and also for the possible influences of interactions with other plant or animal species.

Table 1. Main types of forest and tree resources management

Naturally regenerated forests		Planted forests				Trees outside forests, and agroforestry systems
Primary	**Modified natural**	**Semi-natural**		**Plantations**		
		Assisted natural regeneration	**Planted component**	**Productive**	**Protective**	
Forests of native species, where there are no clearly visible indications of human activities and the ecological processes are not directly disturbed by humans	Forests of naturally regenerated native species where there are clearly visible indications of significant human activities	Silvicultural practices in natural forest by intensive management: • weeding • fertilizing • thinning • selective logging	Forests of native species, established through planting or seeding intensively managed	Forests of introduced and/ or native species established through planting or seeding mainly for production of wood or non-wood goods	Forests of introduced and/ or native species, established through planting or seeding mainly for provision of services	Stands smaller than 0.5 ha; tree cover in agricultural land (agroforestry systems, home gardens, orchards); trees in urban environments; and scattered along roads and in landscapes

Adequate *in situ* conservation measures are needed in order to preserve the natural growing conditions of tree species and thereby allow study and better understanding of their evolutionary processes and adaptation to changes. Information from *in situ* conservation activities for marginal and/ or range-limits populations will be essential in providing options for adaptation to climate change.

On-farm management of FGR, including agroforestry systems, is identified as a land-use type that contributes substantially to *in situ* conservation of FGR, particularly domesticated or semi-domesticated species (e.g. the agroforestry parkland system in West Africa).

Many priority species identified in country reports from semi-arid zones are trees growing on farmlands, including agroforestry systems. Most of them are native species that have been traditionally managed by farmers for centuries.

Tree diversity in farmland varies from a few species in some countries to several hundred species in some others. Some of these species are semi-domesticated species that occur only in

agroforestry systems. Sustainable management of agroforestry systems is therefore needed in order to conserve the genetic resources of these species.

Given the large number of tree species recorded worldwide (see above), it is clear that there is a need for priority setting among the many species that might be targeted for action. Priority setting is complicated greatly by the lack of basic information on the variation, variation patterns and potentialities of many tree species.

The general aim of priority setting is to compare the consequences and trade-offs of a range of actions. It implies that some areas, species or genetic resources will be given lower priority than others. When different stakeholders have similar priorities, concerted action on the part of these stakeholders is possible. When their priorities are dissimilar, independent but harmonized action is more likely to succeed. It is likely that among governmental, non-governmental and international organizations active in forest biological diversity and genetic conservation, substantial differences will exist in terms of priorities, as well as in terms of their capabilities to implement various management techniques. Where such differences exist, it will be necessary to form coalitions for action, operating under coherent frameworks and at appropriate levels.

Commitment at national and local levels to specified objectives and priorities is a prerequisite for the implementation of sustainable conservation programmes. Governments have worked towards ensuring wide ownership of their country reports by organizing stakeholder workshops to review and validate them. During the 2012 regional consultations in the Near East and North Africa, West Africa, Central Asia, Asia, the Pacific, Central Africa, East and Southern Africa, and Latin America, regional priorities for action were identified. In many cases, regional priority species were discussed. However, the process needs to be continued in order to define detailed actions for each species and to allocate responsibilities among actors and partners at national, regional and international levels.

Ex situ conservation. In a growing number of situations, *in situ* conservation of FGR is no longer possible, in particular due to the effects of climate change. As a consequence, conservation strategies should include the creation of both *in situ* and *ex situ* conservation units.

Long-term goal

Maintain genetic diversity and the evolutionary processes of forest trees and other woody plant species by better implementing and harmonizing measures to conserve FGR, both *in situ* and *ex situ*, including through regional cooperation and networking.

National level

Strategic Priority 5: Strengthen the contribution of primary forests and protected areas to *in situ* conservation of forest genetic resources

Rationale

In the current context of increasing pressure on forest land and forest resources, primary forests and protected areas remain refuges for threatened FGR. A substantial proportion of wild and/ or endemic plants occur only in primary forests and protected forest areas. Only in those forests is the natural population genetic structure conserved. Natural processes involved in the dynamics of FGR are better assessed and understood in protected natural forests, which remain the best laboratories for studying species' ecology and biology. The contributions of primary forests and protected areas to the development of knowledge on plant species and to the conservation of FGR, therefore, need to be promoted.

Actions

- Develop collaboration between institutions or programmes in charge of protected forest areas and those responsible for the development and use of FGR, such as national forest tree breeding centres, forest tree seed centres and other forest germplasm collection and conservation institutions operating at national or regional levels.
- Promote and reinforce the development of national FGR assessment and conservation activities in primary forests and protected areas and in conservation forests, with the participation of Indigenous Peoples as well as local communities, as appropriate.
- Manage genetic reserves within protected areas to maintain the evolutionary potentials of targeted species.

Strategic Priority 6: Promote the establishment and development of efficient and sustainable *ex situ* conservation systems, including *in vivo* collections and genebanks

Rationale

A comprehensive FGR conservation programme requires some combination of *in situ* and *ex situ* conservation. *Ex situ* conservation of FGR is mainly concerned with sampling as much as possible of the genetic variation that resides within and among populations of the target species. *Ex situ* conservation is, in many cases, the only option available for conserving the intraspecific genetic variation present in peripheral or isolated populations (FAO, FLD & IPGRI,

2004b) that are seriously threatened by changes in land use and environmental conditions (drought, flooding, salinity, etc.). The main objectives of an *ex situ* conservation programme for any particular species are:

- to serve as a backup measure should *in situ* conservation measures be unworkable or unavailable;
- to ensure that a wide range of the diversity available in the species is conserved; and
- to manage the regeneration of the species outside its original natural range (provenance) in a more controlled way, with specific objectives for conservation or use.

Actions

- Promote the documentation, characterization, regeneration and evaluation of FGR germplasm.
- Collect seeds that are representative of natural variation.
- Establish collections of improved seeds.
- Promote the use of post-harvesting procedures, technology and infrastructure that maintain the quality of the seed before and after *ex situ* conservation.
- Promote the awareness, establishment and maintenance of national, subregional and regional genebanks for FGR, as well as specialized nurseries and botanical gardens. Encourage collaboration between research institutes, governments, Indigenous Peoples as well as local communities and international organizations for the management and monitoring of collections.
- Promote and support the FGR conservation initiatives of Indigenous Peoples as well as local communities.
- Promote and develop mechanisms for the involvement of the private sector in the conservation of FGR.
- Foster studies on seed collection, quality, conservation and reproduction.
- Promote and encourage research on the conservation of recalcitrant-seed species.
- Promote the establishment of incentives for *ex situ* conservation.

Strategic Priority 7: Support assessment, management and conservation of marginal and/or range limits forest species populations

Rationale

Marginal populations are fragile and more inclined to degradation than central populations, because they normally have less variation. Evolutionary forces can have particular effects on marginal populations and may lead to specific adaptations. Marginal populations should therefore have high priority in global and regional conservation strategies and programmes.

Actions

- Develop guidelines for the inventory and documentation of marginal forest species populations and promote their management and conservation through their integration into conservation networks and by emphasizing the participation of local communities.
- Encourage comprehensive field and remote-sensing studies to identify and document marginal and/or range limits populations. Encourage the establishment of long-term monitoring systems to track population trends and risks.
- Support and/or promote, as appropriate, programme development and collaboration at global and regional levels to assess marginal populations and promote their conservation and evaluation in both *in situ* and *ex situ* conditions.
- Promote habitat connectivity, including through ecological corridors, for the conservation of marginal and/or range limits populations.

Strategic Priority 8: Support and develop sustainable management and conservation of forest genetic resources on farmland

Rationale

Farmers contribute to FGR management and conservation on-farm in traditional land-use systems such as agroforestry systems. They therefore influence the interspecific and intraspecific diversity of species in the landscape. FGR managed in traditional agroforestry systems are seriously threatened by a lack of regeneration resulting from the increasing pressure on forest resources and current trends in agricultural intensification. There is a need to address the issue of on-farm management of FGR in countries where agroforestry is a common practice.

Actions

- Develop methodological tools for on-farm management and conservation of important agroforestry species.
- species at national and regional levels.
- Provide technical support to promote on-farm sustainable management and use of FGR, including through partnerships between the agricultural and forestry sectors.
- Evaluate and improve traditional agroforestry systems that integrate agroforestry and FGR conservation and use.
- Raise awareness among farmers on the benefits of on-farm sustainable management, conservation and use of FGR.

Strategic Priority 9: Support and strengthen the role of forests managed by Indigenous Peoples as well as local communities in the sustainable management and conservation of forest genetic resources

Rationale

Forests managed by or in collaboration with Indigenous Peoples as well as local communities often have a strong role in maintaining genetic resources. Forest management by Indigenous Peoples as well as local communities has been shown to be one of the most effective means of combining conservation with wealth creation. There is a need for greater recognition and support for this role in countries where this type of management is relevant.

Actions

- Assess the status of conservation and management of FGR in forests managed by Indigenous Peoples as well as local communities.
- Provide technical support and capacity building for the sustainable management and conservation of FGR in forests managed by Indigenous Peoples as well as local communities.
- Encourage the development of and provide financial resources on a voluntary basis for FGR conservation led and managed by Indigenous Peoples as well as local communities.

Strategic Priorities 10: Identify priority species for action

Rationale

Because of the complexity of the subject, FGR management is better handled using a species approach. Processes involved in genetic diversity dynamics determine species adaptation and performance in a given environment. Understanding and developing FGR using a species approach is regarded as a useful option. Given the high number of forest species present in each country, it is impossible to develop research activities or programmes for all forest species. Priority species should be identified at national and subnational levels, and these priorities should be shared in existing regional and international fora so as to provide better focus and more efficient resource use.

Actions

- Promote research networks focusing on important species at national, regional and international levels.

- Update priority species lists regularly at both country and regional levels.
- Provide international support for the development of guidelines for species prioritization and for the identification of priority areas of research.
- The prioritization of species could focus on species, populations or varieties that have reduced populations and are in danger of extinction, or on species of diverse current and future value, including those of strategic, scientific and economic importance. The values of these species, populations, breeds or varieties could be linked to socioeconomic, gender, food security or climate change adaptation factors, or to sacred or cultural significance at local, national and international levels.

Regional level

Strategic Priority 11: Develop and implement regional *in situ* conservation strategies and promote ecoregional networking and collaboration

Rationale

The ecosystem approach is a way to manage entire ecosystems in a holistic manner without excluding other management and conservation approaches such as area-based management tools and single-species conservation practices. Ideally, all these approaches should be integrated, through regional networks when appropriate.

Regional strategies for conservation of FGR, including regional networks of *in situ* genetic conservation units and corridors of priority species, are needed in order to ensure the dynamic conservation of key FGR and their evolutionary abilities for the future. Definition and implementation of regional conservation strategies provide a good justification for coordination and collaboration at regional level. Investment in joint activities at regional level may often be more efficient and cost-effective than the multiplication and duplication of activities at national level.

Actions

- Identify gaps in the existing conservation efforts with a view to addressing them, where appropriate.
- Promote research programmes that address regional knowledge gaps in the conservation and use of FGR.

- Develop methodologies for the preparation of regional strategies for conservation of FGR, including principles for their implementation, taking into account existing experiences and using existing regional networks relevant to FGR.
- Promote ecosystem-based partnerships and regional collaboration to develop species genetic resources conservation and evaluation programmes (*in situ* and *ex situ*) in line with commitments under existing international regulations.
- Mobilize resources by involving existing regional economic and environmental organizations.

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Priority Area 3
Sustainable use, development and management of forest genetic resources

Introduction

The challenge of achieving food security for all and environmental sustainability in the context of the combined effects of climate change and increasing human pressure on forests is greater now than it has ever been. More efficient use and management of forest resources is therefore needed, especially in tropical and less-developed countries, in order to meet the growing demand for forest goods and services.

To ensure sustainable management of forests, the genetic resources of forest trees must be conserved and developed, whether they exist as trees in planted forest, natural forest or protected conservation stands, or as seeds or tissue cultures in storage. Managing FGR involves developing overall strategies, applying specific methodologies, developing and applying new technologies, and coordinating local, national, regional and global efforts (National Research Council, 1991).

Monitoring forest biological diversity and managing FGR requires reliable information on the status and trends of these resources. There are no common standard methods for measuring changes in the status of FGR in relation to sustainable forest management as undertaken in most countries.

Parameters commonly included in national and global forest resources assessments, such as forest area, species occurrence and richness, and forest fragmentation, are not on their own sufficient to provide information on FGR. Adequate and commonly agreed indicators are needed and should be integrated into national forest assessment policies and monitoring tools.

Many countries face difficulties in obtaining the quantity and quality of forest reproductive material needed to implement their tree-planting programmes. Lack of an efficient tree seed supply system was reported as a bottleneck for national reforestation and restoration programmes by many countries. Furthermore, using improved forest reproductive material can be expected to provide a substantial production gain. Efforts should therefore be made to support the seed supply system, including by promoting and supporting the training of smallholder and family farmers, Indigenous Peoples, local communities, and traditional peoples for the reproduction of FGR and their direct involvement in the forest seedlings production chain.

Long-term goal

Enhance the sustainable use, development and management of FGR as a key contribution to environmental sustainability, food security and poverty alleviation.

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National level

Strategic Priority 12: Develop and reinforce national seed programmes to ensure the availability of genetically appropriate tree seeds in the quantities and of the (certified) quality needed for national plantation programmes

Rationale

Countries reported that large plantations are being established to serve many purposes, including the production of timber, biofuel and fibres, and the provision of various environmental services such as reclamation of degraded land, and soil and water management. However, most developing countries lack adequate forest seed supply systems. This jeopardizes the success and performance of plantation programmes in these countries. This concern is highlighted in most countries' reports and was identified as a priority area for action by most regional consultations.

Actions

- Promote the establishment and support of national tree seed systems, including tree seed centres and related programmes, where appropriate.
- Enhance collaboration between tree seed centres, and develop common quality seed standards, to facilitate the exchange of forest reproductive material within regions and support national afforestation programmes.

Strategic Priority 13: Promote restoration and rehabilitation of ecosystems using genetically appropriate material

Rationale

Millions of square kilometres of degraded and disturbed forest land are attracting attention from many national and international organizations and agencies as potential sites for restoration or rehabilitation, but little attention is typically paid to the importance of selecting appropriate genetic sources to produce planting material. The challenge of matching adapted populations to current and future environmental conditions is often complicated by the extent and the type of degradation and disturbance involved, which may require field testing and/or predictive modelling.

Actions

- Support and conduct research to identify key variables for choosing populations that are well-matched to current and future conditions at degraded sites.
- Support and equip research centres and nurseries with adequate infrastructure, where appropriate, to conduct studies aimed at identifying genetically appropriate material for restoration and rehabilitation of forest ecosystems.
- Develop guidelines and decision-support tools for selecting appropriate genetic composition of planting materials.
- Develop protocols, where appropriate, for the restoration and rehabilitation of ecosystems that ensure the use of appropriate genetic material.
- Develop and implement monitoring protocols to assess the viability and resilience of tree populations over time at rehabilitated sites.

Strategic Priority 14: Support climate change adaptation and mitigation through proper management and use of forest genetic resources

Rationale

The current growing concern about climate change and its effects on ecosystems and the performance of forest-related production systems challenges stakeholders in FGR management to better understand forest species and mechanisms for adaptation to current and future climate changes. Genetic diversity is needed in order to ensure that species can adapt, as well as to allow for artificial selection and breeding to improve productivity. Thus, genetic diversity, including diversity among species, is the key to the resilience of forest ecosystems and the adaptation of forest species to climate change.

Actions

- Develop subnational, national and regional standard methods and guidelines for the identification, selection and use of species population conservation units, based on environmental and sociocultural factors, which are the main determinants of the status of forest and agroforestry ecosystem diversity.
- Assist countries in their efforts to improve the conservation and sustainable use of FGR in the face of climate change by:
  - promoting best practices in FGR management, specifically in the fields of conservation, exploration, testing, breeding and sustainable use; and
  - promoting FGR's contributions to environmental sustainability through the development and use of well-suited genetic material.

Strategic Priority 15: Promote appropriate use of new and emerging technology to support the conservation, development and sustainable use of forest genetic resources

Rationale

Tree improvement activities remain limited to a few economically important tree species, not only because of financial constraints but also because of trees' specific characteristics. Trees are long-lived perennial species, with long regeneration cycles and late sexual maturity. Because of these characteristics, improvement and breeding research in tree species require more time than is required for the equivalent activities in other crops. New technologies, as appropriate, such as genomics and micro-propagation, can help accelerate the selection process and unlock the huge potential of forest trees. These new technologies have proved to be useful for understanding forest ecosystem dynamics, including genetic processes. They can orientate appropriate practical measures for sustainable conservation, management, restoration and rehabilitation.

Actions

- Promote the use of emerging technology to support the conservation and sustainable use of FGR, as well as tree improvement programmes, and to enhance the use of quality FGR in forestry programmes.
- Assess available technologies and their effectiveness for use in *in situ* and *ex situ* conservation and in the development of the genetic resources of priority species.

Strategic Priority 16: Develop and reinforce research programmes on tree breeding, domestication and bioprospection in order to maximize the benefits of forest genetic resources

Rationale

In addition to timber, forests provide many other commodities that are important to local communities and to national economies. The importance of medicinal plants, fodder plants and food plants is increasingly recognized and strongly reflected in many country reports. In many developing countries, a large proportion of the population makes use of medicinal plants for health care. Free grazing is still a common practice in many developing countries, and forests are often an essential source of fodder. These various resources are still harvested from wild plants in forest lands and in some cases are under threat due to overexploitation. Domestication of such plants will improve the supply of the targeted products while reducing the vulnerability of their genetic resources.

Actions

- Assess and evaluate the contributions of forest species to environmental services (soil and water conservation, carbon sequestration, etc.).
- Assess and evaluate the contributions of priority forest species to important national production sectors (timber, fruits, fodder, vegetable oil, vegetables, medicines, etc.).
- Develop programme-based multipurpose tree breeding for priority species. Promote participatory approaches by involving local communities in selection and breeding programmes for priority species, based on farmers' desired traits.
- Support collaborative research projects between academic institutions, research centres, industrial partners and Indigenous Peoples as well as local communities, where appropriate.

International level

Strategic Priority 17: Develop and promote networking and collaboration among concerned countries to combat invasive species (animals, plants and microorganisms) as well as diseases and pests affecting forest genetic resources

Rationale

Invasive species are increasingly being noted as major threats to FGR. The major threats come from plant species that have the capacity to invade natural and/or slightly disturbed forest associations and become predominant, often displacing whole ecosystems and species. Pests and diseases affecting forests and trees are predicted to become an increasing threat as the effects of climate change become more prominent and the movement of plant material across countries and continents accelerates.

Actions

- Review existing standards and protocols, where appropriate, and, when needed, propose voluntary protocols for the movement of forest plant material across countries and regions, to avoid the spread of invasive organisms.
- Promote national assessments of invasive alien species and their effects on FGR, using a regional or ecosystem approach.

- Work with the International Plant Protection Convention to include FGR in existing biosecurity regulations and integrate concerns about FGR.
- Promote the development of research on pests and diseases that affect FGR.

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Priority Area 4
Policies, institutions and capacity building

Introduction

In many cases, national policies and regulatory frameworks for FGR are partial, ineffective or non-existent. FGR are not well understood or properly managed in many countries. Awareness building at all levels will be a key factor in mobilizing popular support and international collaboration for the implementation of the Global Plan of Action.

In many countries, there is an increasing demand for forest products, including roundwood, firewood and non-wood forest products. Country data reported in the Global Forest Resources Assessment 2010 showed that the value of non-wood forest products is sometimes higher than that of roundwood and firewood. Sound social and economic policies are needed at national and global levels to ensure the integration of FGR into wider national forest policy frameworks and global initiatives such as the Global Forest Resources Assessment and thereby promote the sustainable management of FGR.

In many countries, lack of trained personnel – both in terms of numbers and in terms of the skills needed to address FGR management in times of rapid social and economic change – is a major impediment to developing and implementing FGR policies, strategies, programmes and projects. Education and training to build sustainable capacity in all priority areas is required.

Institutional strengthening, training and support to research are needed in order to enable countries to respond to pressing and increasingly varied needs in FGR conservation and management. The measures required include the promotion of training and research – at national and international levels – on recent developments in FGR management. The role of national research systems and programmes, including tree seed centres, and their support by the CGIAR system, is crucial in this context.

In the context of scarce resources and a great risk of duplicating activities at national and regional levels, efforts should be made, when appropriate, to promote partnerships and coordination at national, regional and international levels. Promotion of networking should also be encouraged in order to improve links between stakeholders and to support institutional development and capacity building.

Long-term goal

Establish and review relevant policies and legal frameworks in order to integrate major issues related to sustainable FGR management and to strengthen institutional and human capacity to achieve successful medium- and long-term planning of the forestry sector in Member Nations, as well as for the long-term sustainable use, management and conservation of FGR.

National level

Strategic Priority 18: Develop national strategies for *in situ* and *ex situ* conservation of forest genetic resources and their sustainable use

Rationale

Countries often lack adequate policies and programmes addressing *in situ* and *ex situ* conservation of FGR. Given the large number of stakeholders involved in many ways in the use, development and management of FGR at national level, it is useful to develop national strategies and programmes that provide an appropriate framework for action.

Actions

- Develop policy tools, where appropriate, to provide national frameworks for action for the sustainable *in situ* and *ex situ* conservation of FGR.
- Develop or strengthen institutional capacities with respect to *in situ* and *ex situ* conservation of FGR to enable the implementation of existing or future national strategies for the conservation of FGR, including genebanks and *in vivo* collections.

Strategic Priority 19: Update forest genetic resources conservation and management needs and integrate them into wider policies, programmes and frameworks of action at national, regional and global levels

Rationale

Many countries reported that due to the scarcity of financial and human resources, FGR may be best managed if relevant needs and priorities are addressed through wider national forestry and land-use programmes and policies, in line with relevant international strategic documents of the United Nations.

Actions

- Promote the review of national policy and legal frameworks on forests and the integration into them of key concerns related to FGR.
- Review and align forest and land-use policies and programmes, where appropriate, to better integrate the FGR dimension and contribute to climate change mitigation and adaptation.
- Promote the integration of FGR into National Biodiversity Strategies and Action Plans (NBSAPs) and National Adaptation Plans (NAPs).
- Amend national biosecurity regulations, where appropriate, to integrate concerns about FGR.

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Strategic Priority 20: Develop collaboration and promote coordination of national institutions and programmes related to forest genetic resources

Rationale

There is a need to build synergy at national level between coordination units and national focal points of the various international programmes and conventions to enable efficient information sharing and resource use and to provide better support to efforts to address national priorities for FGR.

Actions

- Enhance cooperation and synergies between national authorities and national focal points in charge of FGR-related international programmes and conventions (e.g. Convention on Biological Diversity, United Nations Convention to Combat Desertification, climate change, access and benefit-sharing, Global Forest Resources Assessment, national forest programmes).
- Create national consultation frameworks, such as permanent national commissions for FGR, to enhance sustainable management of FGR within national development and research programmes.

Strategic Priority 21: Establish and strengthen educational and research capacities on forest genetic resources to ensure adequate technical support to related development programmes

Rationale

Many countries reported that technical and scientific capacities on FGR are weak. University curricula on issues such as FGR conservation, tree breeding and management of non-wood forest products are rare in many countries. Research and education need to be strengthened in all areas of FGR management in most countries, in particular in developing countries and countries in economic transition. Establishing, strengthening and maintaining research and educational institutions is a key factor in the development of national capacities to plan and implement priority activities in the sustainable use, development and conservation of FGR.

Actions

- Develop appropriate training modules to support the management and use of the genetic resources of forest plants that are important sources of wood and non wood forest products.

- Develop intersector and interinstitutional collaboration to make use of available scientific and technical information to ensure that the content of training modules is appropriate.
- Organize training workshops on recent technological developments, as well as exposure visits for scientists and technicians and training courses for decision-makers and forest managers.
- Strengthen national research and education programmes and capacity on FGR and promote regional connectivity and collaboration between institutions.
- Reinforce the capacity and operation of national herbaria to support the development of knowledge on forest species.
- Develop and improve accessibility to training modules or curricula that address FGR management. This could lead to: 1) the identification of medium- and long-term needs for qualified human resources to support national development and research activities on FGR; 2) the development of extension and education modules with special emphasis on modern technology (e.g. biotechnology), to support national education capacity on forestry and FGR management.
- Strengthen research centres focused on FGR and its conservation, with advanced technology and adequate infrastructure to support educational and research efforts, where appropriate.

Strategic Priority 22: Promote the participation of Indigenous Peoples as well as local communities in forest genetic resources management in the context of decentralization

Rationale

Many developing countries have a decentralized country administration or are undergoing a decentralization process. In such countries, natural resources management, including FGR management, should take this context into consideration. In some cases, regulation measures are decided at province or state level. In countries where this is the case, there is a need to provide appropriate technical support to decentralized administrations in order to enable them to review or develop policy tools that ensure sustainable use and management of FGR, including protection, preservation and sustainable use of FGR for maintaining customary use by Indigenous Peoples, and local communities.

Actions

- Develop, strengthen or review local policies related to the management of forests, to increase awareness of FGR among Indigenous Peoples as well as local communities and to

properly address the need for sustainable management, development and use of FGR at decentralized level.

- Develop adequate human resources to support the proper management of FGR within ongoing decentralization processes and to enhance the contribution of FGR to local development.

Regional level

Strategic Priority 23: Promote and apply mechanisms for germplasm exchange at regional level to support research and development activities, in agreement with international conventions

Rationale

Transfer and exchange of forest genetic material are regulated under international agreements, which, in some cases, can limit access to proper material and subsequently prevent research programmes from delivering results that are likely to have a real impact.

Actions

- Improve countries' awareness and understanding of existing international regulations on genetic material exchange.
- In compliance with national legislation and international regulations, improve or develop adapted national and regional exchange regulations that ensure that records are kept of the source and transfer of forest genetic material for research purposes, and promote mechanisms to facilitate access to material for scientific work within the region.
- Strengthen and encourage regional collaboration to facilitate the exchange of FGR and data and information on FGR, and the sharing of benefits derived from them.

Strategic Priority 24: Reinforce regional and international cooperation to support education, knowledge dissemination, research, and conservation and sustainable management of forest genetic resources

Rationale

One of the most common constraints to research activities on FGR is a lack of adequate financial and human resources. Countries therefore recommend strengthening international and regional cooperation to better support education and research activities on the conservation and sustainable management of FGR.

Actions

- Promote the establishment or strengthening of networks and partnerships – including between countries, non-governmental organizations and research institutions – that share information, experiences, best practices and theoretical and practical knowledge on FGR and their management.
- Identify international channels for financial support (e.g. climate-related funds).

International level

Strategic Priority 25: Encourage the establishment of network activities and support the development and reinforcement of international networking and information sharing on forest genetic resources research, management and conservation

Rationale

Most regional consultation workshops identified networking as a priority for action that would improve information and experience sharing among stakeholders at the global level.

Actions

- Establish better linkages and mechanisms to enhance coordination and collaboration between institutions on technology, policy implementation and the sharing of information and best practices.
- Support existing international networks that share knowledge on FGR research and conservation.

Strategic Priority 26: Promote public and international awareness of the roles and values of forest genetic resources

Rationale

Many countries reported that decision-makers and the general public are not well aware of the importance of FGR. Needs and priorities for action at country, regional and international levels will be better supported by stakeholders if effective awareness-raising activities are developed and supported.

Actions

- Ensure effective communication and information sharing related to the sustainable management and use of FGR using various approaches, including traditional media, digital platforms, education materials, social networks, documentaries and scientific publications.
- Promote international campaigns to raise awareness of the status and trends of FGR and their contribution to the Sustainable Development Goals, including contributions to food security, ecotourism potential, poverty alleviation and environment sustainability, and subsequently seek to develop wide support at government and institutional levels and among the general public, using voluntary mechanisms.
- Organize training on FGR for forestry technicians and administration managers.

Strategic Priority 27: Strengthen efforts to mobilize the necessary resources, including financing, for the conservation, sustainable use and development of forest genetic resources

Rationale

Most countries reported that the conservation, sustainable use and development of FGR lack adequate funding. Efforts need to be made at national and international levels to ensure that strategic priorities are successfully translated into actions within existing and/or new programmes.

Actions

- Support countries and stakeholders to design appropriate policies and programmes for the conservation, sustainable use and development of FGR using existing and new voluntary resources, particularly in developing countries and countries with economies in transition.
- Encourage countries and stakeholders to explore new funding opportunities, including climate change and biodiversity-related funds. Support the creation of sustainable incentives for conservation and sustainable use activities related to FGR.

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Table 2. Summary table of the strategic priorities of the Global Plan of Action for the Conservation, Sustainable Use and Development of Forest Genetic Resources

Priority area 1: Improving the availability of, and access to, information on FGR	**Priority area 2: *In situ* and *ex situ* conservation of FGR**	**Priority area 3: Sustainable use, development and management of FGR**	**Priority area 4: Policies, institutions and capacity building**
National level			
SP 1. Establish and strengthen national FGR assessment, characterization and monitoring systems	SP 5. Strengthen the contribution of primary forests and protected areas to *in situ* conservation of FGR	SP 12. Develop and reinforce national seed programmes to ensure the availability of genetically appropriate tree seeds in the quantities and of the (certified) quality needed for national plantation programmes	SP 18. Develop national strategies for *in situ* and *ex situ* conservation of FGR and their sustainable use
SP 2. Develop national and subnational systems for the assessment and management of traditional knowledge on FGR	SP 6. Promote the establishment and development of efficient and sustainable *ex situ* conservation systems, including in vivo collections and genebanks	SP 13. Promote restoration and rehabilitation of ecosystems using genetically appropriate material	SP 19. Update FGR conservation and management needs and integrate them into wider policies, programmes and frameworks of action at national, regional and global levels
	SP 7. Support assessment, management and conservation of marginal and/or range limits forest species populations	SP 14. Support climate change adaptation and mitigation through proper management and use of FGR	SP 20. Develop collaboration and promote coordination of national institutions and programmes related to FGR
	SP8. Support and develop sustainable management and conservation of FGR on farmland	SP 15. Promote appropriate use of new and emerging technology to support the conservation, development and sustainable use of FGR	SP 21. Establish and strengthen educational and research capacities on FGR to ensure adequate technical support to related development programmes
	SP 9. Support and strengthen the role of forests managed by Indigenous People as well as local communities in the sustainable management and conservation of FGR	SP 16. Develop and reinforce research programmes on tree breeding, domestication and bioprospection in maximize the benefits of FGR	SP 22. Promote the participation of Indigenous Peoples as well as local communities in FGR management in the context of decentralization
	SP 10. Identify priority species for action		

Priority area 1: Improving the availability of, and access to, information on FGR	Priority area 2: *In situ* and *ex situ* conservation of FGR	Priority area 3: Sustainable use, development and management of FGR	Priority area 4: Policies, institutions and capacity building
Regional level			
	SP 11. Develop and implement regional *in situ* conservation strategies and promote ecoregional networking and collaboration		SP 23. Promote and apply mechanisms for germplasm exchange at regional level to support research and development activities, in agreement with international conventions
			SP 24. Reinforce regional and international cooperation to support education, knowledge dissemination, research, and conservation and sustainable management of FGR
International level			
SP 3. Develop international technical standards and protocols for FGR inventories, characterization and monitoring of trends and risks		SP 17. Develop and promote networking and collaboration among concerned countries to combat invasive species (animals, plants and microorganisms) as well as diseases and pests affecting FGR	SP 25. Encourage the establishment of network activities and support development and reinforcement of international networking and information sharing on FGR research, management and conservation
SP 4. Promote the establishment and the reinforcement of FGR information systems (databases) to cover available scientific and traditional knowledge on uses, distribution, habitats, biology and genetic variation of species and species populations			SP 26. Promote public and international awareness of the roles and values of FGR
			SP 27. Strengthen efforts to mobilize the necessary resources, including financing, for the conservation, sustainable use and development of FGR

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PART III

REAFFIRMING THE WORLD'S COMMITMENT TO THE CONSERVATION, SUSTAINABLE USE AND DEVELOPMENT OF FOREST GENETIC RESOURCES

Resolution 2/2025

THE CONFERENCE,

Recalling the adoption of the Global Plan of Action for the Conservation, Sustainable Use and Development of Forest Genetic Resources, in 2013 (FAO, 2013), as the key milestone in international efforts to enhance the management of the genetic resources of forest trees and other woody plants species important for forestry, including agroforestry;

Welcoming *The Second Report on the State of the World's Forest Genetic Resources*;

Recognizing the important contributions of forest genetic resources to the 2030 Agenda for Sustainable Development and the United Nations Strategic Plan for Forests 2017–2030, as well as to globally agreed instruments on biodiversity, climate change and desertification;

Affirming that the Global Plan of Action for the Conservation, Sustainable Use and Development of Forest Genetic Resources continues to serve as the key policy framework for enhancing the management of forest genetic resources at national, regional and international levels;

Adopts the Global Plan of Action for the Conservation, Sustainable Use and Development of Forest Genetic Resources, as revised by the Commission on Genetic Resources for Food and Agriculture at its Twentieth Regular Session (FAO, 2025b),

Invites Members to:

- **develop** or **strengthen** national policies, strategies and action plans, as appropriate, for the management of forest genetic resources;
- **strengthen** their efforts to implement the Global Plan of Action and report the progress made to FAO;
- **gather** more comprehensive information on the conservation, use and development of forest genetic resources to advance the management of these resources;
- **pay** due attention to genetic aspects in the management of both natural and planted forests to maintain and enhance their adaptability, productivity and resilience under climate change;
- **integrate** forest genetic resources into relevant national policies and strategies on forests, biodiversity, climate change and desertification;

Requests the Organization to:

- **continue** facilitating and supporting the implementation of the Global Plan of Action and the country reporting process to monitor the progress made in this regard;
- **continue** its efforts to increase international awareness of the Global Plan of Action and the importance of forest genetic resources;
- **promote** the work on forest genetic resources when implementing its corporate strategies on biodiversity mainstreaming and climate change;
- **ensure** that all relevant units of the Organization in headquarters and Decentralized Offices are supportive to the implementation of the Global Plan of Action in the context of the FAO Strategic Framework 2022-31;
- **continue** to pursue extra-budgetary resources to support the implementation of the Global Plan of Action.

Calls on all partners and stakeholders, including donors, to collaborate on the implementation of the Global Plan of Action.

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Conservation, sustainable use and development of forest genetic resources are of vital importance to the management and utilization of the world's forests and other wooded lands, including agroforestry systems. These resources, i.e. the heritable materials maintained within and among tree and other woody plant species, underpin the resilience, adaptability and productivity of forests and other tree-based systems, and contribute in many ways to sustainable development.

At its 20th Regular Session in March 2025, the Commission on Genetic Resources for Food and Agriculture agreed upon the revised Global Plan of Action for the Conservation, Sustainable Use and Development of Forest Genetic Resources based on the findings of *The Second Report on the State of the World's Forest Genetic Resources* and the recommendations of the Intergovernmental Technical Working Group on Forest Genetic Resources.

The FAO Conference adopted the revised Global Plan of Action at its 44th Session in July 2025 and invited Members to strengthen their efforts to implement it. The revised Global Plan of Action includes four priority areas: 1) improving the availability of, and access to, information on forest genetic resources; 2) *in situ* and *ex situ* conservation of forest genetic resources; 3) sustainable use, development and management of forest genetic resources; and 4) policies, institutions and capacity-building. Within these priority areas, it identifies 27 strategic priorities and 93 specific actions that can be taken to enhance the conservation, sustainable use and development of forest genetic resources.

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